



# Lawrence Livermore National Laboratory

June 18, 2003  
MIP-2003-011

Dr. Gerald Petersen  
U.S. Department of Energy  
19901 Germantown Road  
Germantown, MD 20874-1290

Dear Gerry,

Please find enclosed an Operations Plan for the July 2003 mission to the Marshall Islands.

This mission is consistent with the work plan laid out in our Statement of Work and our MOU driven obligations for FY2003. An outline of our planned activities is shown below:

## Destination Point 1 (Majuro Island)

1. Implement the whole body counting program on Majuro Islands and attend the opening dedication for the facility.

## Destination Point 2 (Rongelap Island)

1. Establish the Rongelap on-island bioassay collection facility and perform collections as required. Collect all available workers on the island using BN supervising staff as the controls. Establish a plan for additional periodic collection using BN Majuro and WBC technician support.
2. Perform in-situ gamma spectrometry to assess external exposure rates on and around airport building, roads and planned housing areas on Rongelap Island, and areas around the community center where conditions have changed since May 2001.
3. Perform some preliminary in-situ gamma spectrometry in the agricultural areas on Rongelap Island with view to future development of a mobile in-situ gamma spectrometry platform.
4. Provide training in field sampling for Marshallese workers on Rongelap Island and develop a strategic sampling plan for the future.
5. Review procedures and performance of WBC technicians, provide advice and training as required.

Destination Point 3 (Enewetak Island)

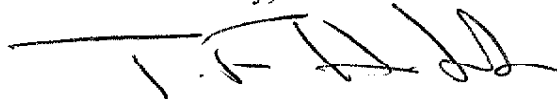
1. Perform bioassay collections for the resident population on Enewetak Island. This is expected to be a 40-person collection, plus controls and QC samples.
2. Review procedures and performance of WBC technicians, provide advice and training as required.

Destination Point 4 (Bikini Island)

1. Perform maintenance checks on the lysimeter experiments, process available lysimeter and well water samples, and collect coconuts, tree and soil cores from the lysimeter 10 and lysimeter 11 experiments.

The mission will require a major logistical and service support effort on the part of Bechtel Nevada (BN) and local Marshallese field support personnel including air travel. The work plan on Rongelap Island has been carried over from missions postponed in November 2002, January 2003 and again in May 2003. Jim Brunk will participate in the Rongelap mission and help with logistics support on Kwajalein. Dave Hickman and I plan on attending the WBC dedication on July 19 and will be available to help answer questions concerning the future operation of the Utrik Whole Body Counting Facility.

Your sincerely,



Terry Hamilton  
Marshall Islands Program Leader

cc.  
Roger Aines, Division Leader - EvSD  
Lance Yamaguchi BN-Honolulu  
William Jackson DOE PASO  
Jim Brunk, LLNL  
David Hickman, LLNL

## **PERSONNEL**

### **LLNL**

Terry Hamilton (Bikini, Enewetak, Rongelap & Majuro)  
Jim Brunk (Kwajalein, Rongelap)  
David Hickman (Majuro)

### **Marshallese and Bechtel (BN) support staff**

Judy Honda (Field logistical support, Enewetak/Rongelap)  
Kenneth Selk (Field logistical support, Bikini, Enewetak, Rongelap & Majuro)  
Marshallese female assistant(s) to support bioassay collection (Enewetak)  
Capelle DeBrum and support personnel (material handling and shipping, general logistics support, Kwajalein)  
Hiroshi Tima (bioassay collection on Rongelap and Enewetak)

### **Other Marshallese support personnel**

General Bikini field station support  
Arthur Tima (Field support Rongelap, training in field sampling)  
Auston Maun (Field support Rongelap, training in field sampling)  
Ikuiak Joriu (Field support Rongelap, training in field sampling)  
Jasper Riklon (Field support Rongelap, training in field sampling)  
Nokes Karoua (Field support Rongelap, training in field sampling)  
Willma Roklon (Field support Rongelap, training in field sampling)

## **TASKS**

### **Majuro (11-21 July 2003—Terry Hamilton: 14-21 July—David Hickman)**

1. To install electronics, calibrate systems and develop QA/QC protocols for a whole body counting (WBC) program on Majuro
2. Provide on-site training of Marshallese WBC technicians
3. Attend the dedication for the WBC facility and provide assistance to DOE management as required.
4. Implement the WBC program on Majuro.
5. Review progress on bioassay collections of Rongelap workers and Utrik Atoll residents, provide recommendation and training as required.

### **Rongelap (21-30 July 2003—Terry Hamilton & Jim Brunk)**

1. Oversee the establishment of the on-island collection facility for the bioassay program.
2. Initiate bioassay collection program on Rongelap Island. Supervise first round of collections and provide training as required

3. Re-survey grid points to assess external dose rates by in-situ gamma spectrometry on those sites within the community center where changes have occurred since May 2001.
4. Establish a grid and conduct an in-situ gamma survey in area of the airport building.
5. Establish grid and conduct an in-situ gamma survey on any established home sites located outside the community area.
6. Perform training of Marshallese support personnel and establish a local program for collection of foodcrop products on Rongelap Island within any established areas that have received potassium.

**Enewetak Island (30 July-06 August 2003—Terry Hamilton)**

1. Review controls to maintain adequate levels of cleanliness to perform bioassay collections in the Enewetak Radiological Laboratory. Initiate next round of bioassay collections to include a new 40-person collection plus appropriate numbers of quality control samples to evaluate inter- and intra-sampling variability.

**[Notes: The collection is expected to include female participants so it will be critical to identify one or more local female personnel to help with the collection. Kenny Selk is expected to help with assigning local personnel to support the ongoing collection after our departure to Bikini].**

**Bikini Island (06-13 August 2003—Terry Hamilton).**

1. Perform maintenance checks on lysimeters
2. Process well waters and any available lysimeter waters
3. Collect coconuts and tree cores from the lysimeter 10 and 11 quad trees
4. Work with BN field station staff on scheduling the remaining application of potassium fertilizer on the HEJ 100 kg per hectare plots.
5. Package field samples and prepare documentation for air transport of materials to Kwajalein on route to Livermore.

**Special requirements of BN and local support staff**

1. Take responsibility for delivery and helping stage supplies and equipment ready for shipment to Rongelap, Enewetak or Bikini as required.
2. Take responsibility for the safe packaging and shipment of urine samples to LLNL.
3. Provide generator for well water pumping
4. Other logistical needs. Ensure that freezer units containing water samples are turned off to allow sample to defrost prior to arrival of Terry Hamilton and Kenny Selk on Bikini.

## **Schedule**

### **Terry Hamilton**

10 July 2003	Oakland to Honolulu
11 July 2003	Honolulu to Majuro
21 July 2003	Majuro to Rongelap
30 July 2003	Rongelap/Kwajalein/Enewetak
6 August 2003	Enewetak to Bikini
13 August 2003	Bikini/Kwajalein/Honolulu/Oakland

### **Dave Hickman**

13 July 2003	Oakland to Honolulu
14 July 2003	Honolulu to Majuro
21 July 2003	Majuro/Honolulu/Oakland

### **Jim Brunk**

17 July 2003	Oakland to Honolulu
18 July 2003	Honolulu to Kwajalein
21 July 2003	Kwajalein to Rongelap
30 July 2003	Rongelap/Kwajalein/Honolulu/Oakland

## **LODGING**

### **Hawaii—Outgoing**

Terry Hamilton (10 July 2003, Hilton)  
David Hickman (13 July 2003, Hilton)  
*Jim Brunk (17 July 2003, Hilton)*

### **Kwajalein**

*Jim Brunk (19—21 July 2003, Kwaj. Lodge)*

### **Majuro**

David Hickman (14—21 July 2003, OutRigger)  
Terry Hamilton (11—21 July 2003, OutRigger)

### **Hawaii—Return**

David Hickman (21 July 2003, Hilton)  
Jim Brunk (30 July 2003, Hilton)  
Terry Hamilton (13 August 2003, Hilton)

## **OTHER SPECIAL REQUIREMENTS:**

### **Rongelap/Enewetak/Bikini**

1. Use of 4 × 4 trucks (or standard pick-ups) for use on Bikini and Rongelap

2. Hire of a vehicle on Enewetak to help transport volunteers participating in the bioassay program.
3. Portable generator for water sampling (Bikini)
4. Provisions for accommodating LLNL, BN and Marshallese support personnel on Rongelap, Enewetak and Bikini field stations.

**Majuro (14—21 July 2003)**

1. It will be helpful to have Kenny in Majuro to help with the installation of the whole body counter.

Sincerely,

A handwritten signature in black ink, appearing to read "Terry F. Hamilton", written over a horizontal line.

Terry F. Hamilton